

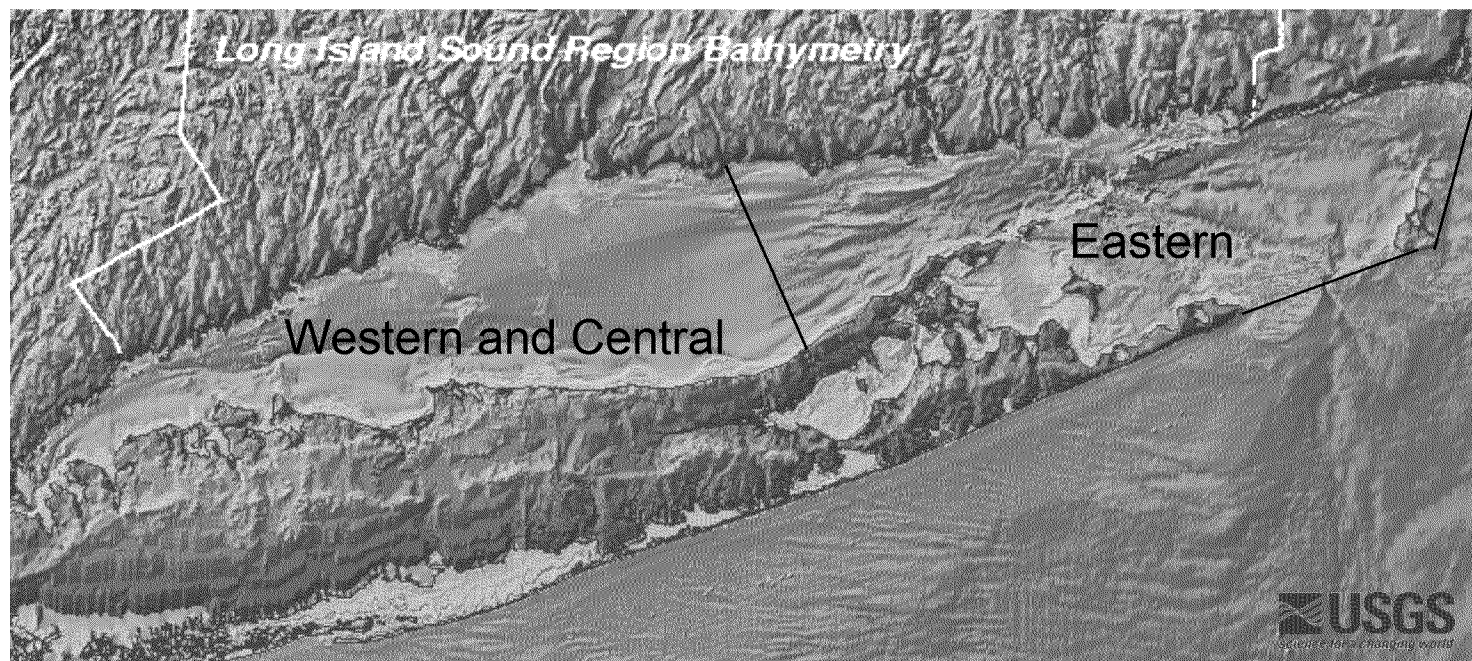
# **Eastern Long Island Sound Supplemental EIS (SEIS) Preliminary Zone of Siting Feasibility and GIS Screening for Candidate Alternative Dredged Material Disposal Sites**

Interagency Meeting at CTDOT

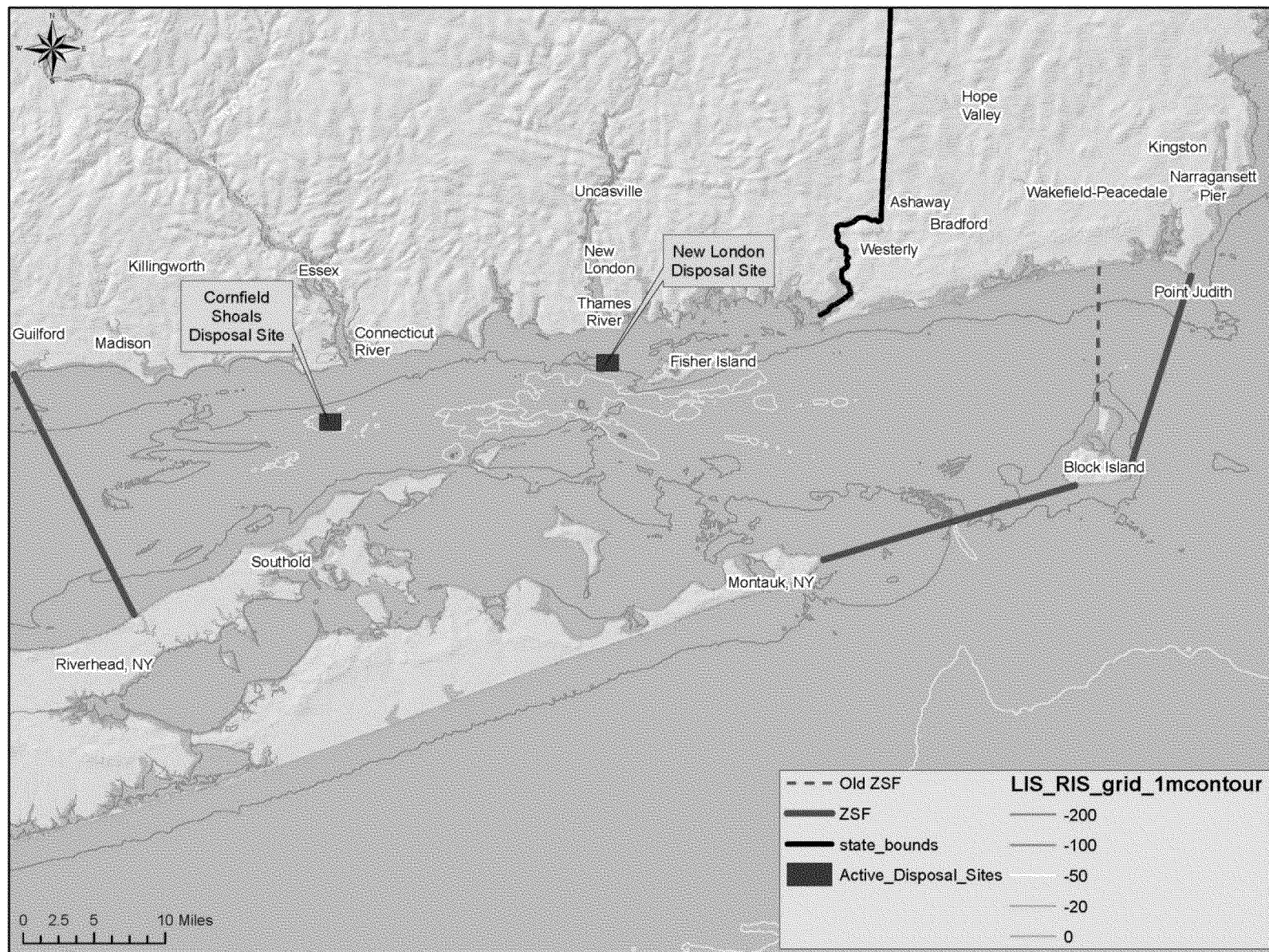
January 8, 2013

# Zone of Siting Feasibility

- The SEIS will address the eastern region of LIS which was deferred during the earlier review of the western and central regions.
- It focuses on the remaining portion of the original ZSF that was not reviewed.



# ZSF for Eastern LIS SEIS



# Objectives of the Screening

- To identify areas within the revised ZSF acceptable for locating an open water disposal site designated under the Ocean Dumping Regulations
- To identify specific alternative disposal site(s) within the acceptable area(s) for further evaluation in the SEIS

# Approach to Screening

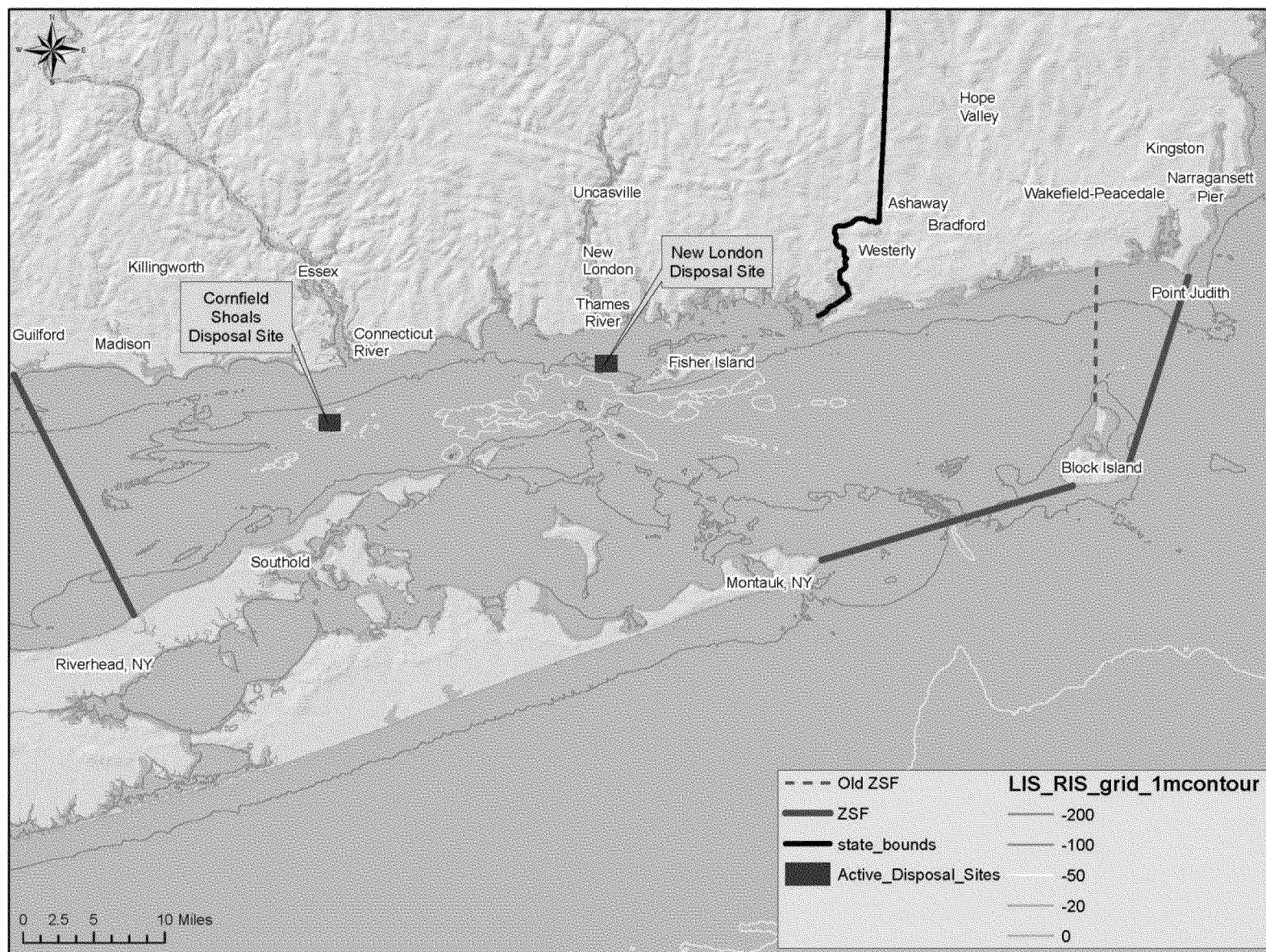
- General Approach

- Review Marine Protection, Research, and Sanctuaries Act of 1972 Criteria
  - 5 general (40 CFR 228.5) and 11 specific regulatory criteria (40 CFR 228.6) for ocean dredged material site designation.
- Map previously defined LIS alternative dredged material site evaluation factors onto the ocean dumping regulation criteria
- Prioritize the LIS factors into Tier 1 and Tier 2 screening levels
  - Tier 1 – rule out areas not acceptable for an open water disposal site
  - Tier 2 – identify specific locations for alternative site(s)

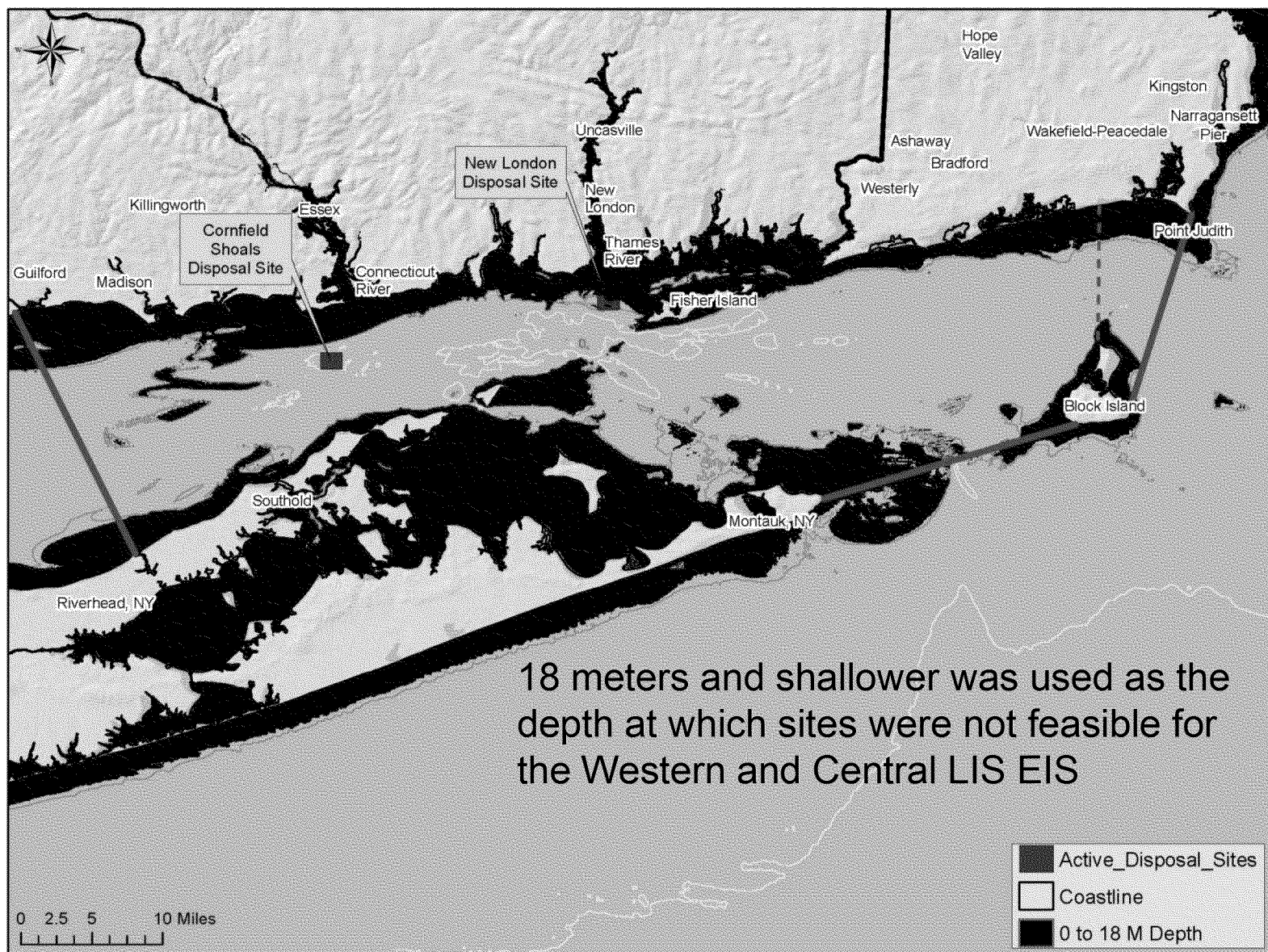
# Approach to Screening

- Tier 1: Rule out areas based on the following
  - Sediment Stability/Instability – 228.5(b)
    - Bathymetry/Currents and Waves
    - Sediment Stability (e.g., Shear Stress, Sediment Texture)
    - Data for this screening will be investigated as part of the physical oceanography work conducted by UCONN as part of this project
  - Disposal Feasibility - 228.5(b)
    - Water Quality Perturbations and Near Term Fate (i.e., STFATE)
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# Sediment Stability/Instability - Bathymetry

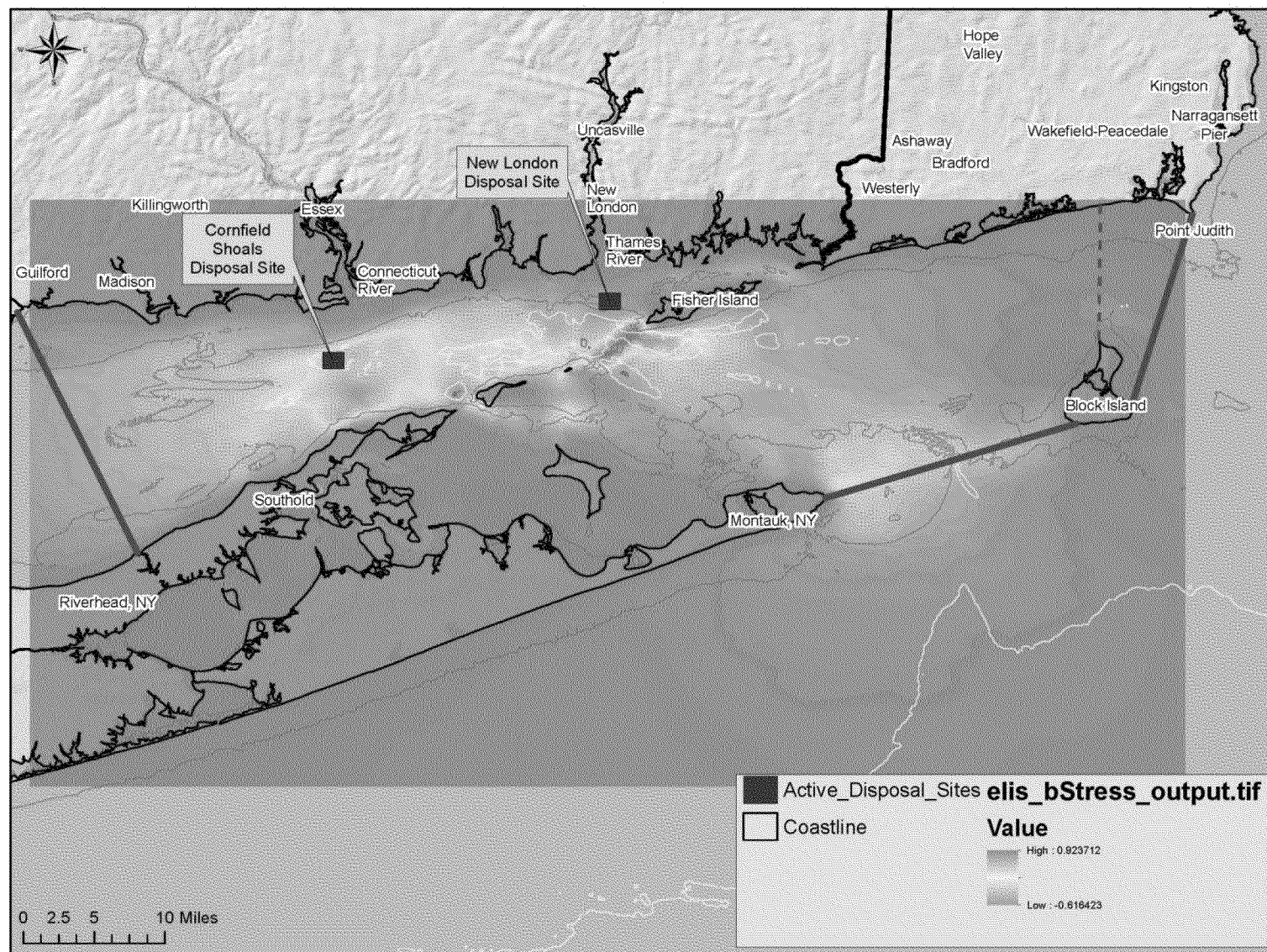


# Sediment Stability/Instability - Bathymetry



# Sediment Stability/Instability– Tidal Driven Bottom Stresses

**Preliminary Data; Considered minimal stress levels**



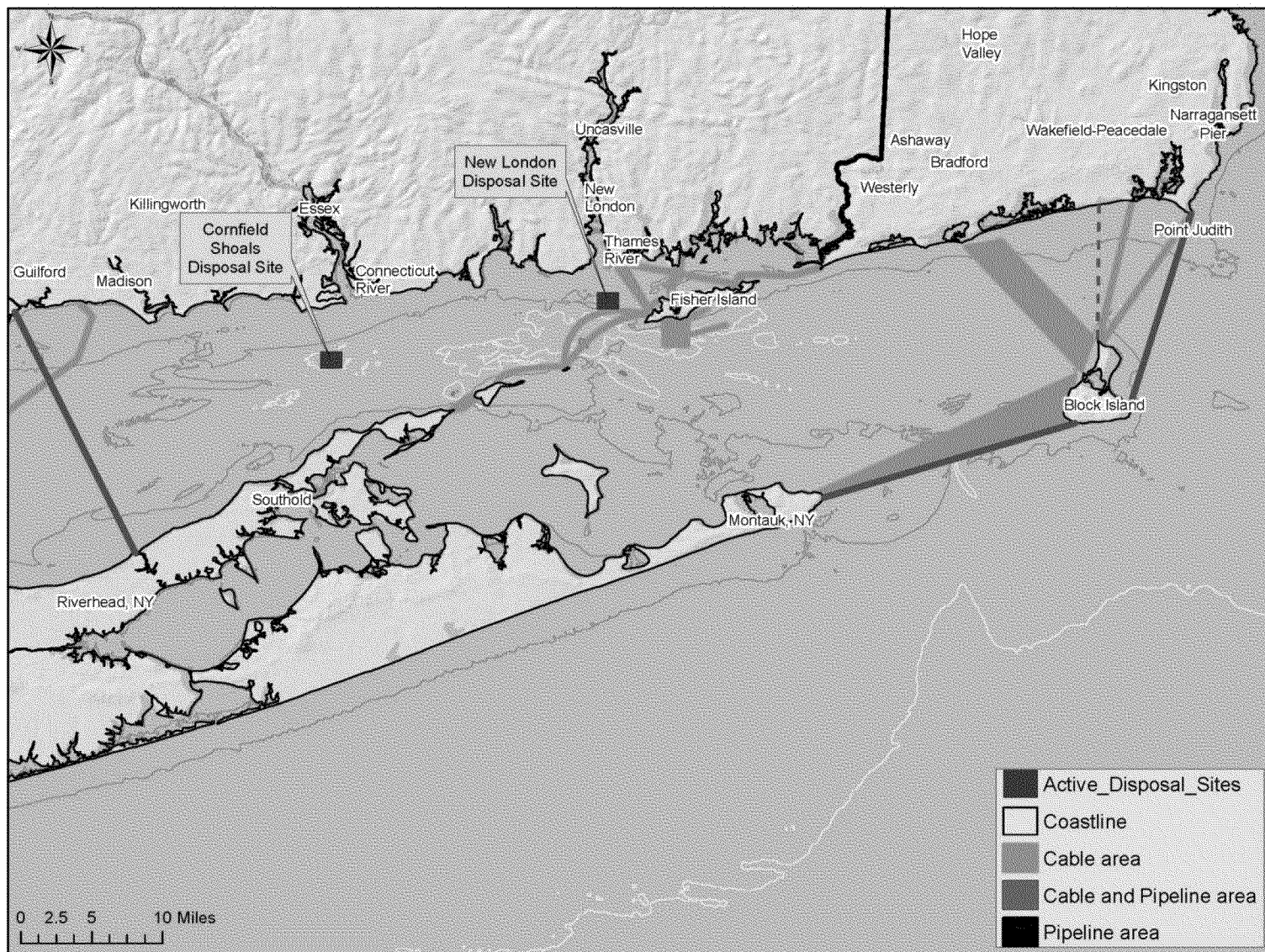
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# Approach to Screening

- Tier 1: Rule out areas based on the following
  - Areas with conflicting uses – 228.6(a)(8)
    - Beaches and amenities – 228.6(a)(3)
    - Utilities (pipelines, cable areas, etc)
    - Conservation areas (sanctuaries, wildlife refuges, national seashores, parks, fish havens, artificial reefs)
  - Shellfish and Fishing areas – 228.5(a)
  - Interference with Navigation – 228.5(a); 228.6(a)(8)
    - Submarines, Coast Guard vessels, large tankers, fishermen, etc.

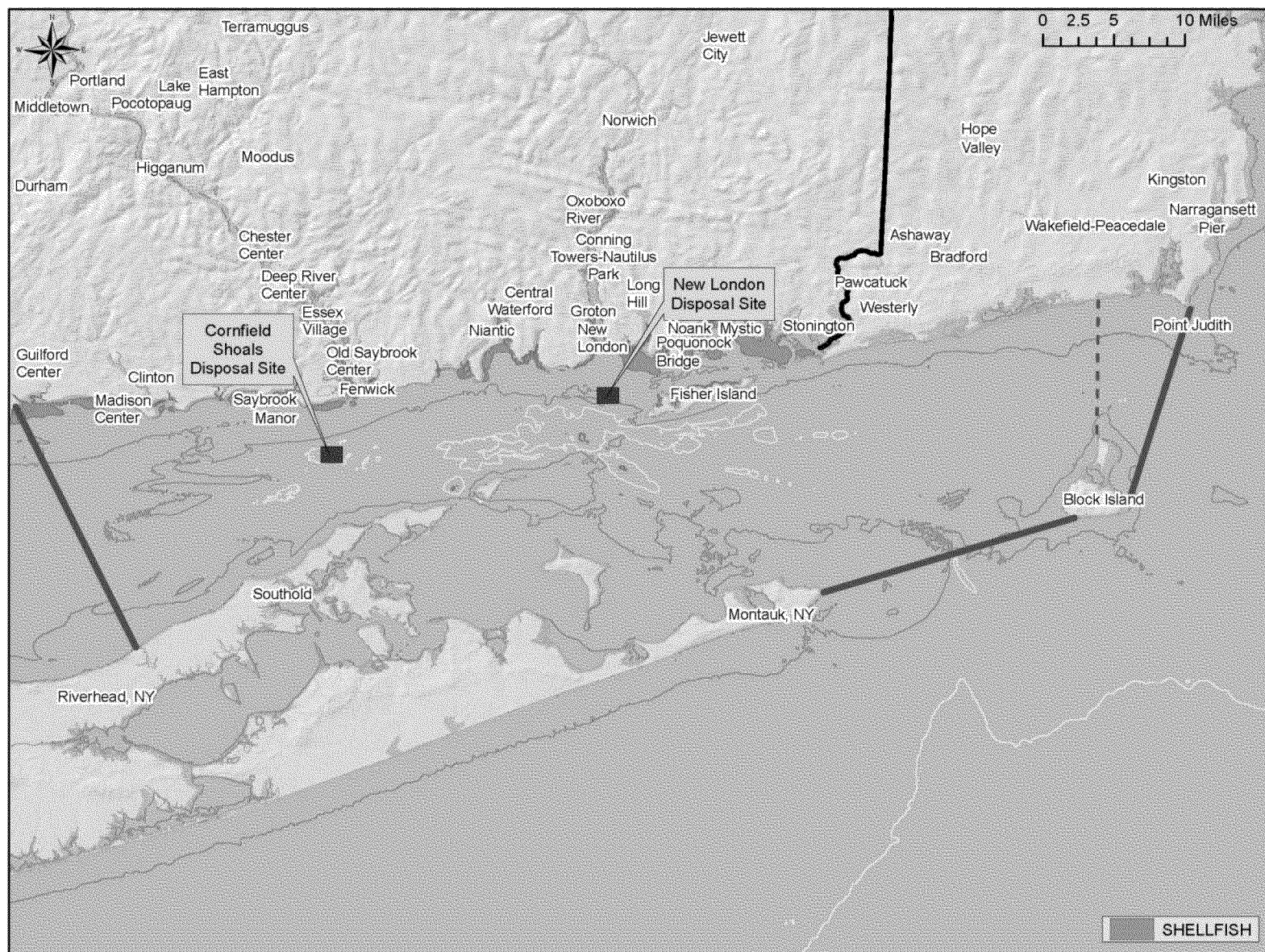
# Areas with Conflicting Uses – Cables and Pipelines (Needs to be Updated)



# Approach to Screening

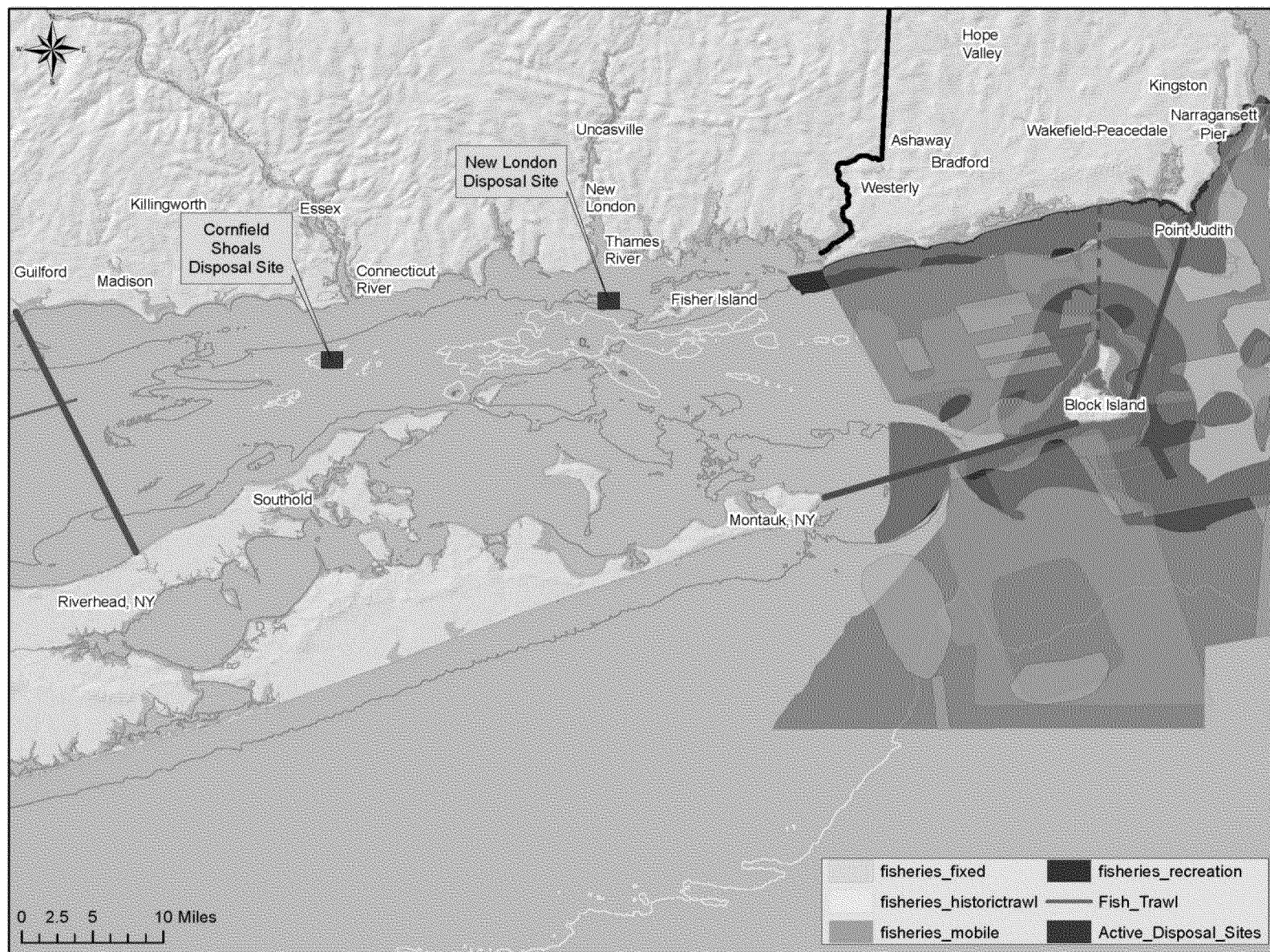
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# Shellfish Bed Locations - (CT updated from CTDEEP, NY Data needed)



# Fishing Areas

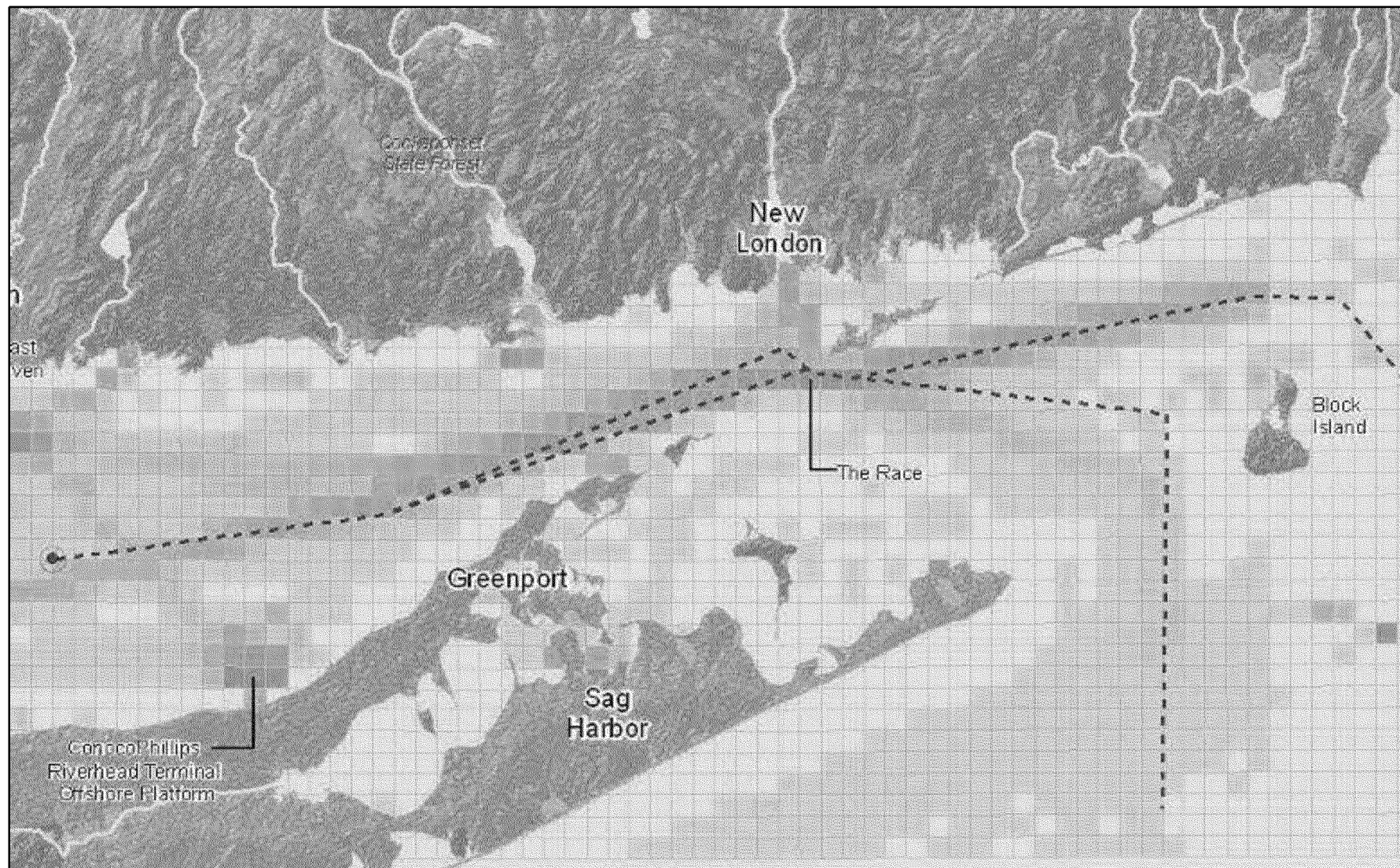
## (RI updated ; CT & NY Data needed)



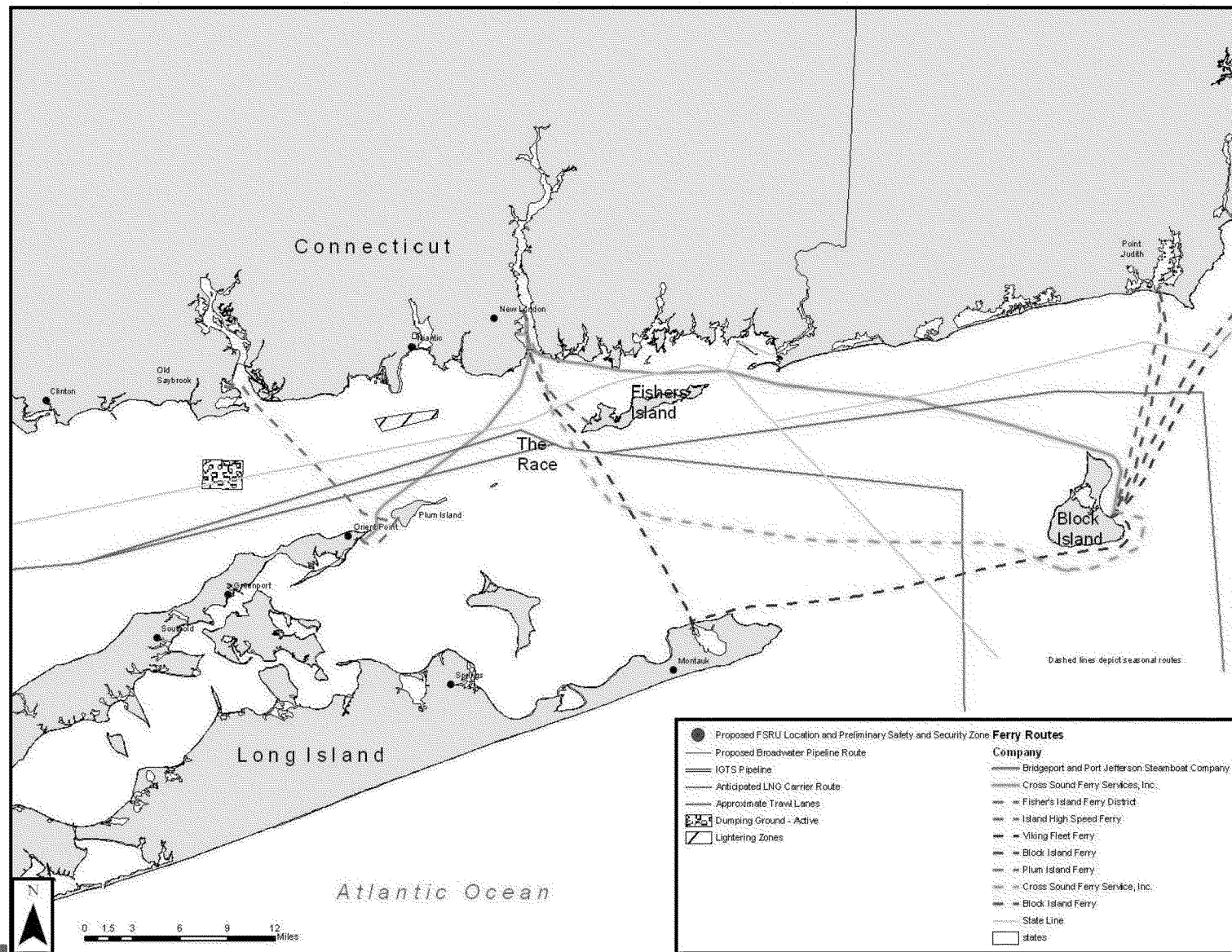
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# Ship Traffic Density (USCG Figure)



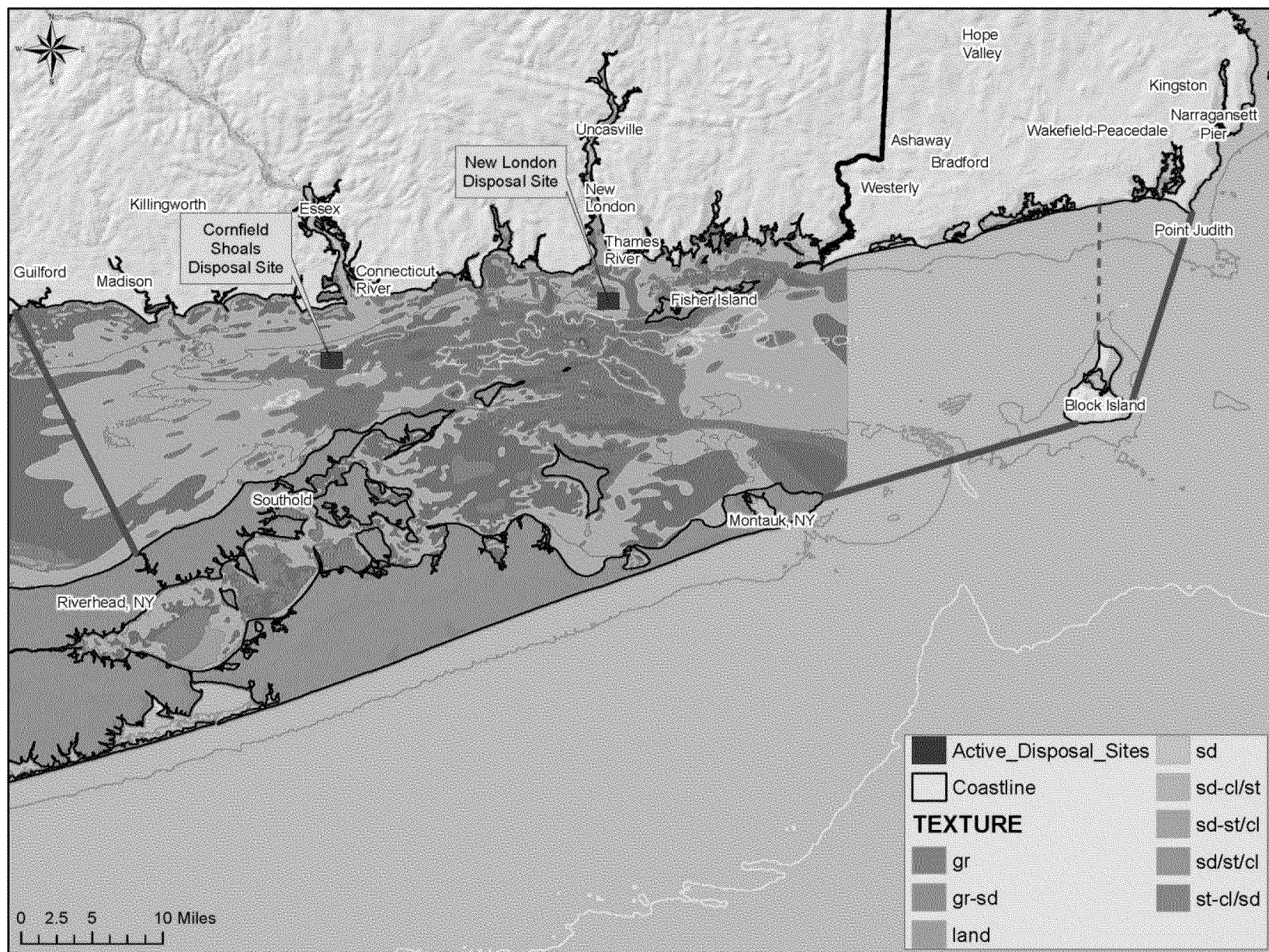
# Commercial Vessel Navigation (USCG Figure)

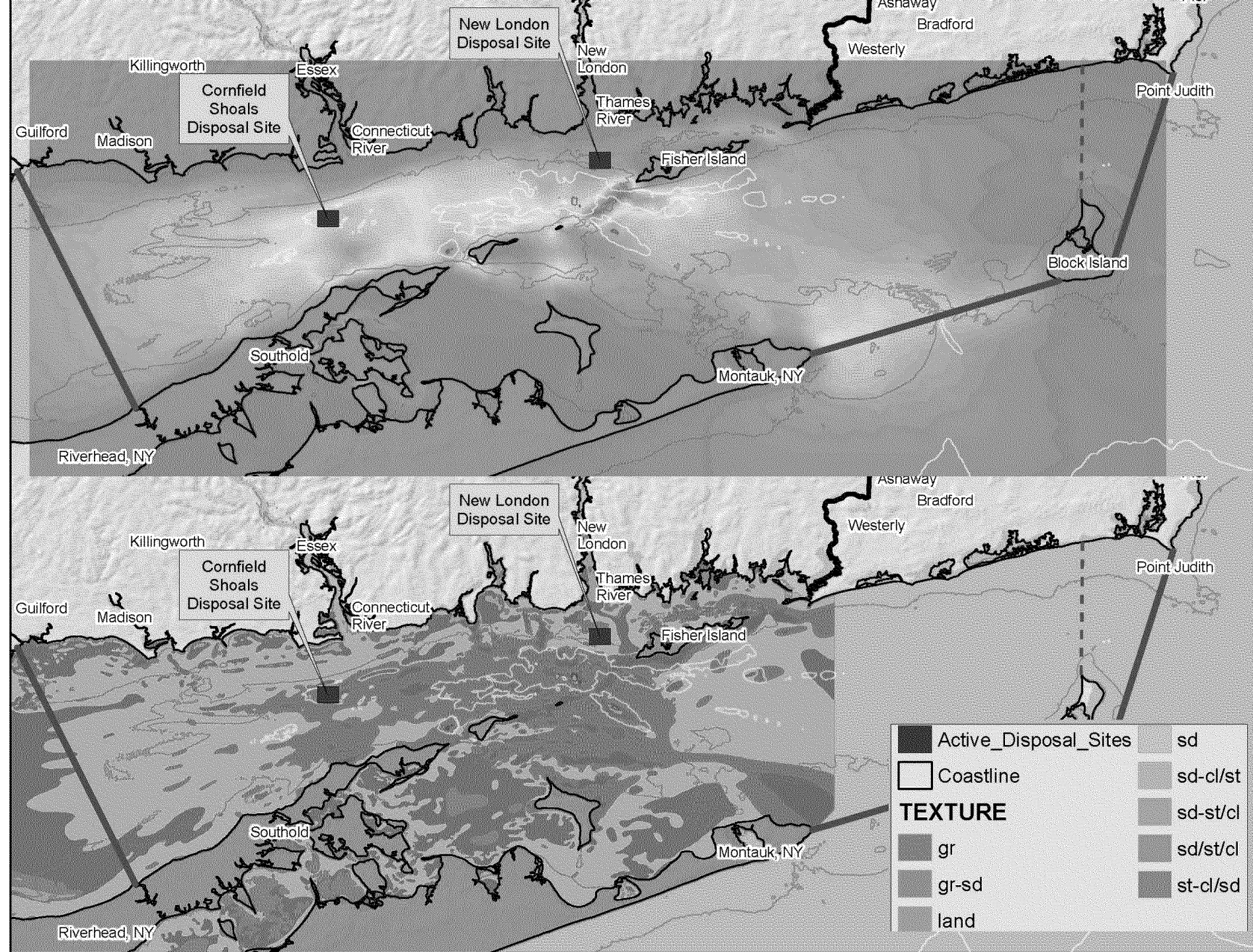


# Approach to Screening

- Tier 1: Rule out areas based on the following
  - Valuable marine habitats – 228.5(a)
    - Gravel and hardbottom areas were identified previously as important to maintain, are these still applicable?
  - Areas of high dispersion potential 228.6(a)(6)
    - Last time only containment sites were warranted. What type(s) of dredged material disposal site(s) are needed?
      - Containment – All materials remain at the location where they are placed
      - Dispersive – Materials are allowed to be moved off of the placement location through currents, etc.

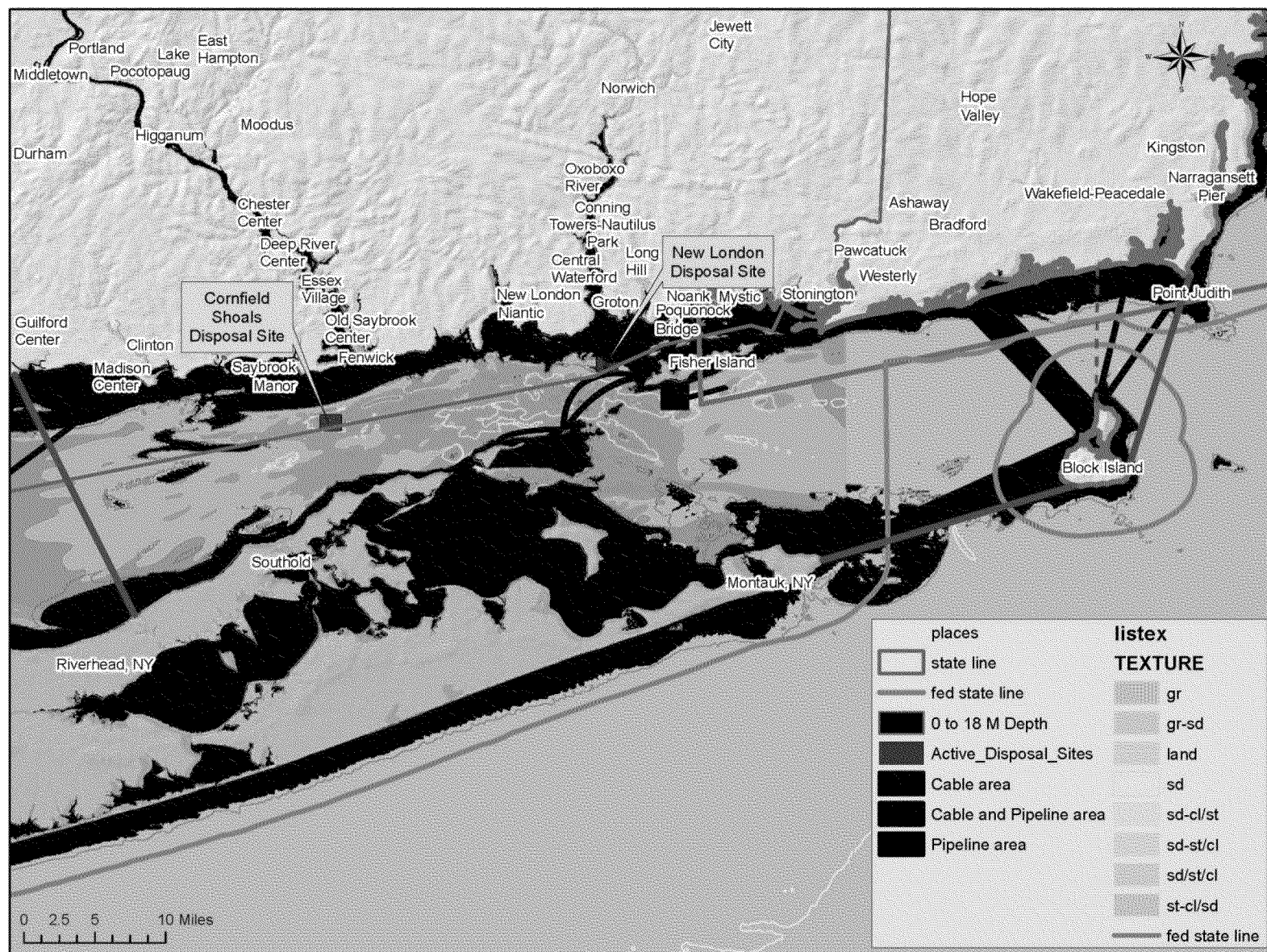
# Sediment Characteristics





# Approach to Screening

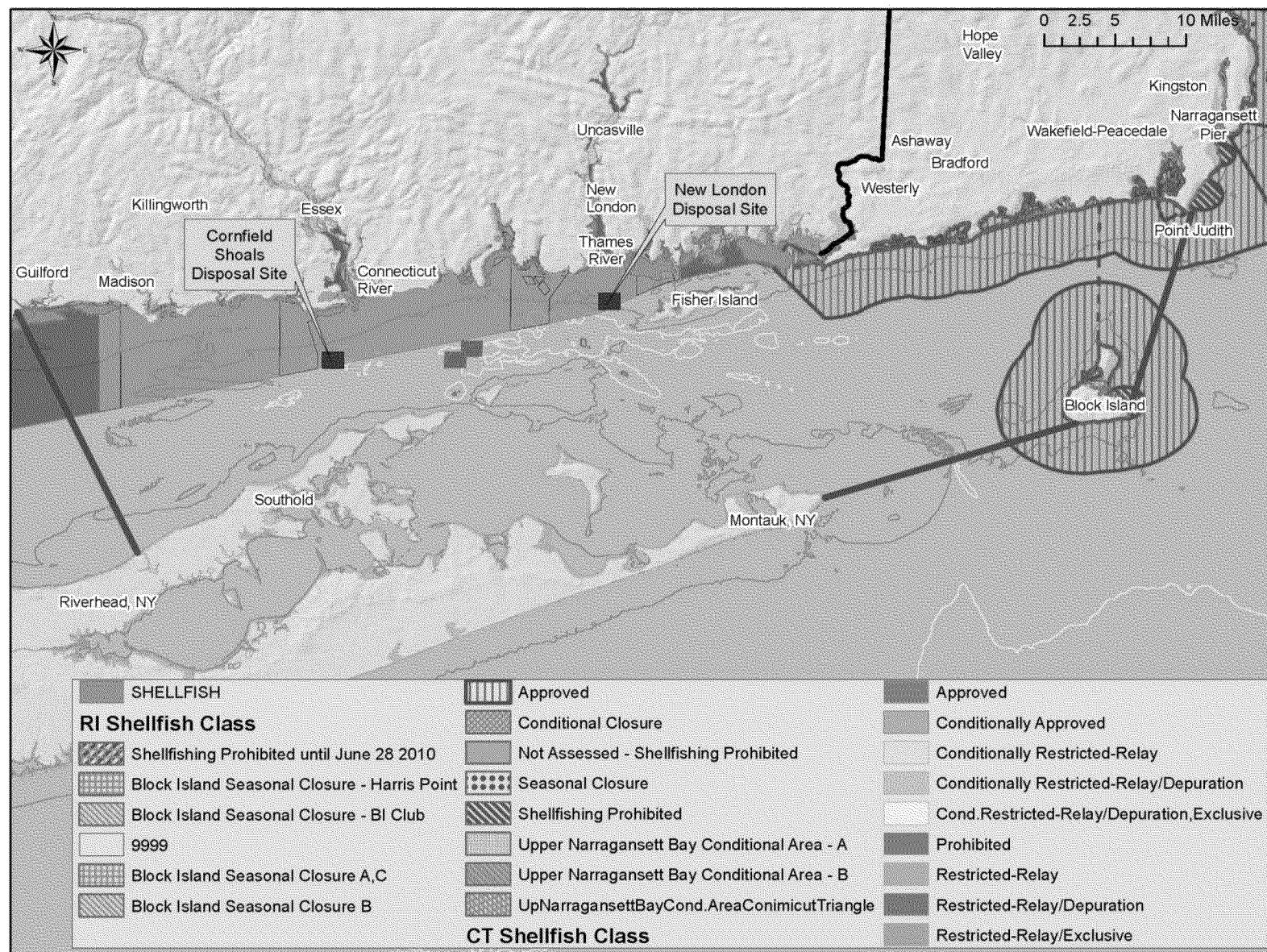
## Tier 1 Type Screening Results



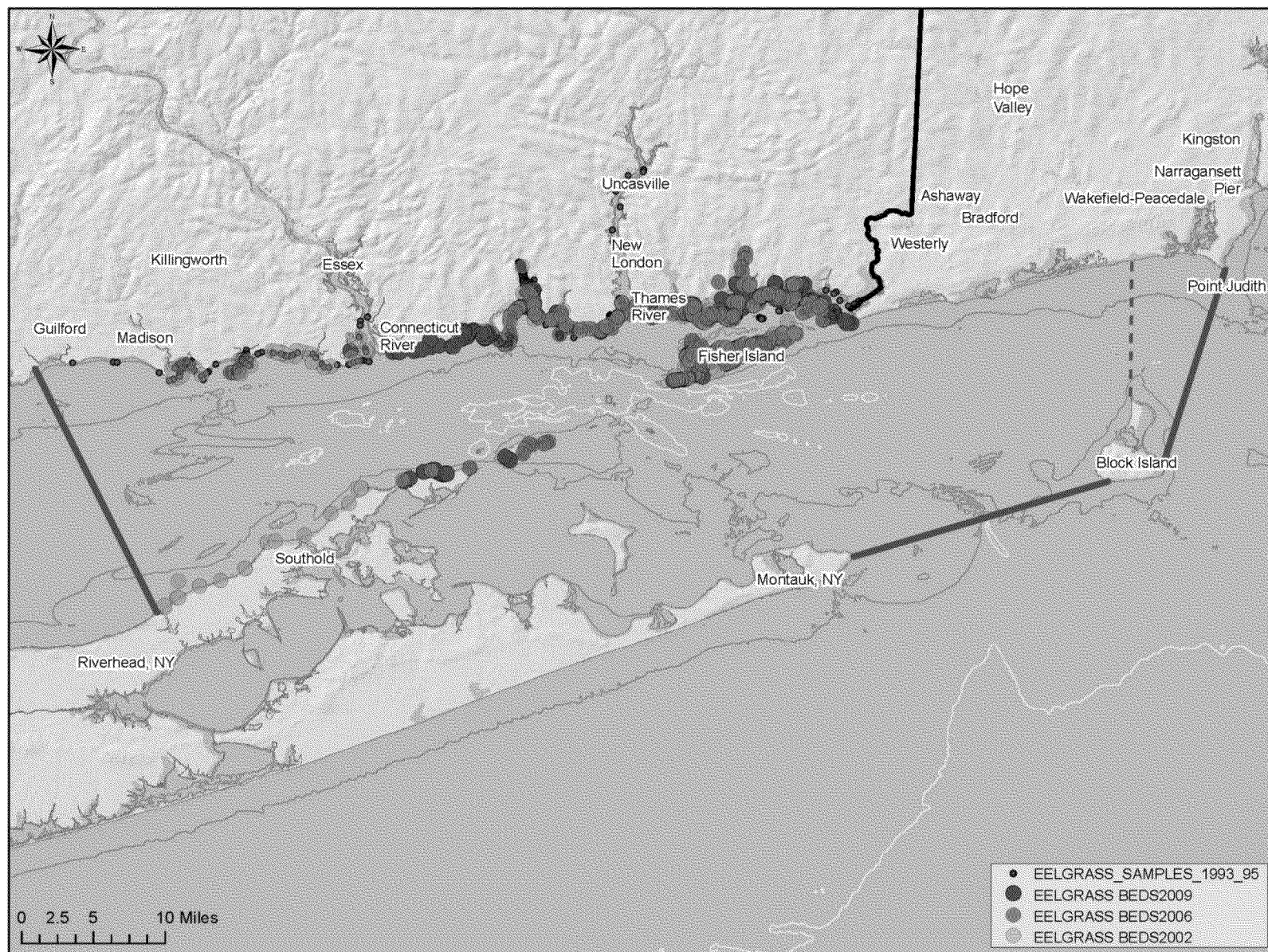
# Approach to Screening

- Tier 2: Identify specific alternative site locations
  - Minimizing impact to
    - Archeological resources – 228.6(a)(11)
    - Fish habitats, fish concentrations – 228.5(a); 228.6(a)(8)
    - Living resources (breeding, spawning, nursery, feeding, passage) – 228.6(a)(2)
    - Benthic community – 228.6(a)(9)
    - Shellfisheries/fisheries resource areas – 228.6(a)(8)
  - Historic Disposal Sites and Continental Shelf – 228.5(e)
  - Preferred siting of areas were also based on a series of site characteristics (e.g., prevailing current direction and velocity, compatible sediment types) – 228.5(d); 228.6(a)(5); 228.6(a)(6)

# Minimizing Impact – Approved/Prohibited Shellfish Areas



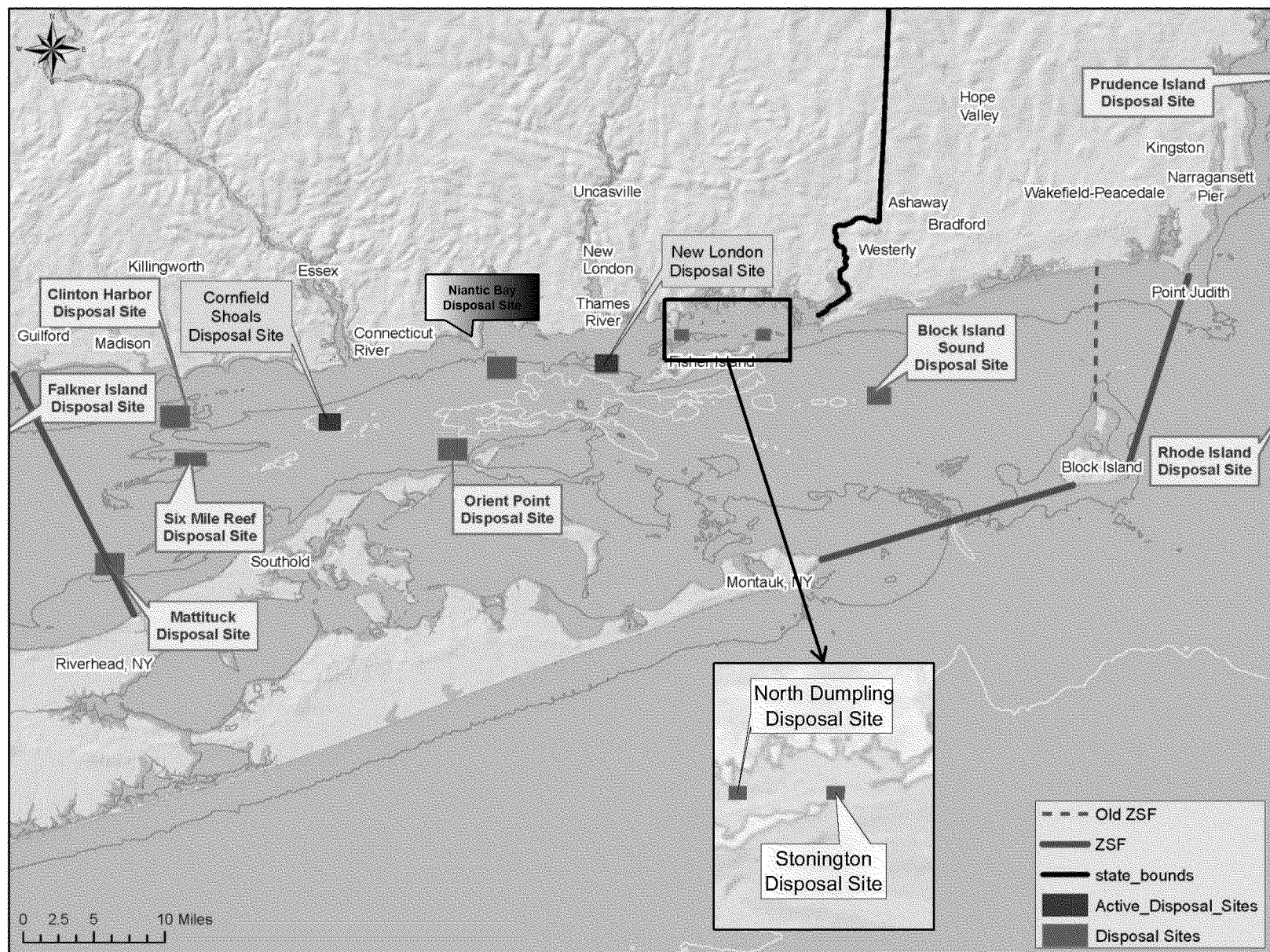
# Minimizing Impact - Eelgrass Beds



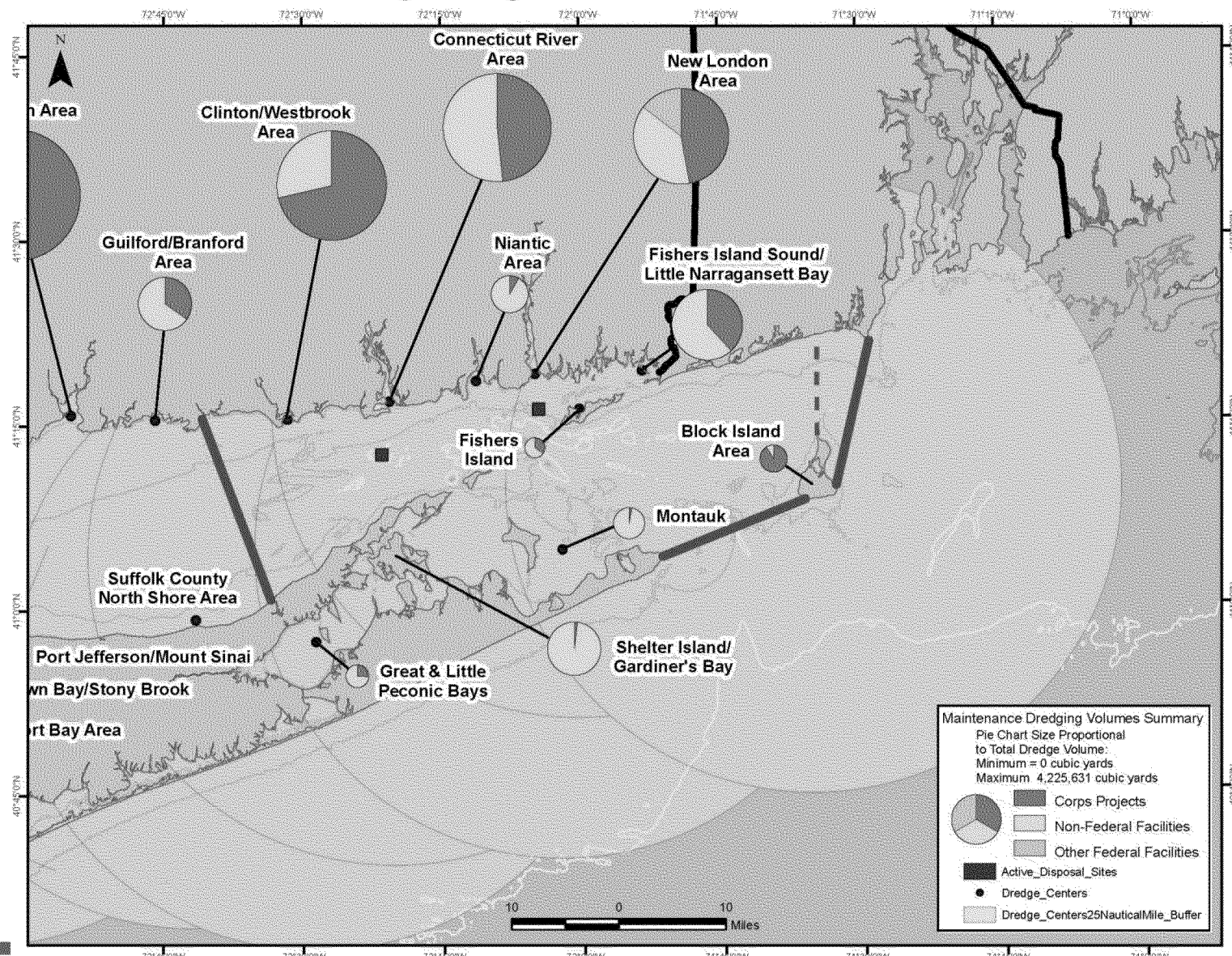
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# Historic and Active Disposal Sites



# Continental Shelf and Areas within 25 nm of Dredging Centers

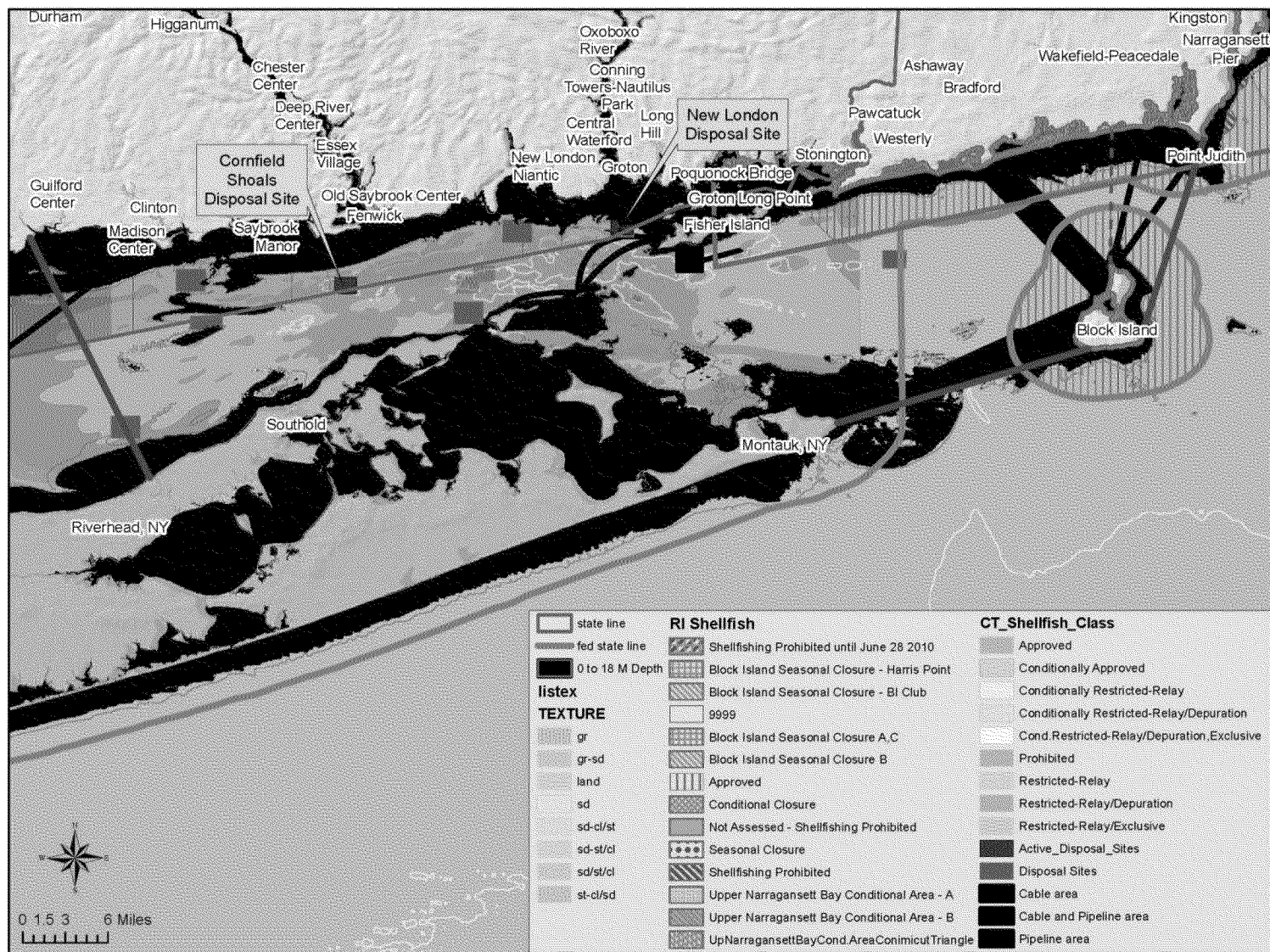


# Approach to Screening

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# Approach to Screening

## Tier 2: Preliminary Screening Results for Discussion Only



## **Tier 2 Alternative Site**

- Several factors must be considering when assessing an area as an alternative site.
  - Site Boundaries – 228.5(d), 228.6(a)(4), 228.6(a)(5)
  - Buffer Zones – 228.5(b), 228.6(a)(6)
  - Reference areas for monitoring and testing – 228.6(a)(5)

## **Tier 2 Alternative Site(s)**

- Factors to be discussed in the SEIS
  - Once alternative site(s) are selected
    - Tier 1 criteria will be addressed as appropriate in SEIS
    - Tier 2 criteria will be examined in detail in the SEIS
  - Additional SEIS siting considerations will include:
    - Existing water quality - 228.6(a)(9)
    - Nuisance Species - 228.6(a)(10)
    - Economic impacts - 228.6(a)(8)
    - Site protection requirements – Environmental consequences
      - 228.10 Evaluating disposal site impacts

# Next Steps

- Finalized criteria that will be used to conduct the screening
  - Minimum depth
  - Bottom types to avoid
  - Containment, Dispersive, or Both
  - Site Protection Requirements
- Identify and acquire more recent or available data to use in the screening
- Identify data gaps and conduct studies to fill them
  - Sediment Stability/Instability
  - STFATE Modeling
  - Minimum Shear stress verification

# Questions and Discussion

